

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. Method for the production of an isotropic polymeric network comprising multifunctional molecules with a functionality of at least 5 by reacting in a solvent the multifunctional molecules with a coupling agent, wherein the coupling agent is present in an amount which is sufficient to couple the multifunctional molecules to at least 5 other multifunctional molecules and wherein the sum, ρ , of the amounts of the multifunctional molecules and coupling agent per unit of volume, in kg/m^3 , is at least equal to the value as given by expression (I)

$$\frac{a(m_1 + \frac{n}{2}m_2)}{10^{26}(d+L)^3} \quad (I)$$

in which

$a = 0.2$

d = the diameter of the multifunctional molecule, including the length of the bonds to the middle of atoms of the coupling agent to which it is attached

L the length of the coupling agent, measured between the middle of the atoms that are connected to the multifunctional molecule

m_1 = the molecular mass of the multifunctional molecule as present in the isotropic polymeric network

m_2 = the molecular mass of the coupling agent as present in the isotropic polymeric network

n = the functionality of the multifunctional molecule ($n \geq 5$)

2. (original) Method for the production of a isotropic polymeric network according to claim 1, wherein p is at least equal to the value as given by expression (I), wherein $a=0.4$.

3. (currently amended) Method for the production of an isotropic polymeric network according to ~~any one of claims 1-2~~ claim 1, wherein the coupling agent comprises a rod like molecule.

4. (original) Isotropic polymeric network with a density lower than 1000 kg/m^3 and a specific Young's modulus of at least $0.01 \text{ GPa.m}^3/\text{kg}$.

5. (original) Isotropic polymeric network according to claim 4, wherein the network is substantially free of cavities comprising a gas.

6. (currently amended) Shaped article comprising the isotropic polymeric network according to ~~any one of claims 4-5~~ claim 4.

7. (currently amended) Use of the isotropic polymeric network of ~~any one of claims 4-5~~ claim 4 as a construction material.